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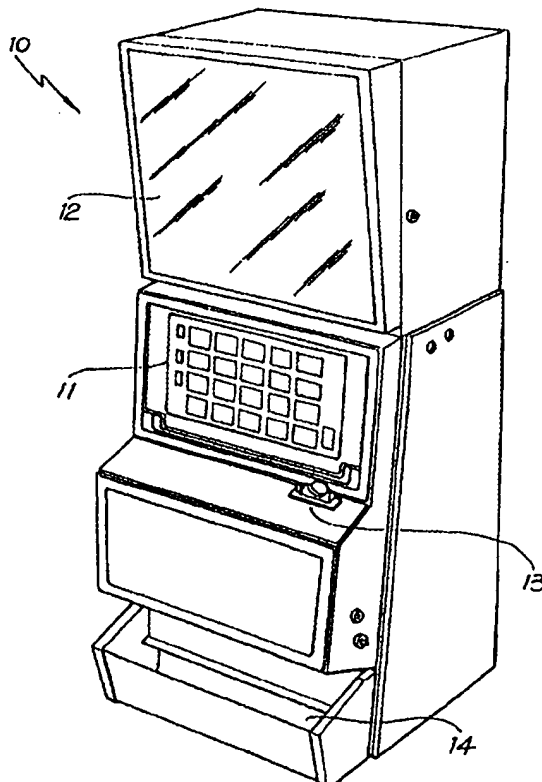
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(54) Title: MULTIPLE HAND CARD GAME

## (57) Abstract

A slot machine providing novel arrangements for such that each hand has identical outcome probabilities independently of each other hand. A video display screen (11) is controlled to display images of the cards dealt in each hand. The video screen is of the touch sensitive variety, having an array of touch sensitive areas located on its display surface. Player controls are implemented by displaying images corresponding to controls on the screen such that when the control images are touched, the associated function is caused to be performed. Buttons (15, 16 and 17) allow selection by the player of corresponding hands upon which a wager is to be placed. Additionally, buttons (18, 19, 20, 21 and 22) enable bets of 1-5 credits to be placed on each hand. Once the player has selected his bet and the number of hands to be played, he touches the gamble button (23) which causes the selected number of hands to be dealt.



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*Multiple hand card game*Technical Field

5 The present invention relates to gaming machines of the type generally referred to as slot machines, fruit machines or poker machines, and in particular the invention provides an improvement to a game played on such a machine.

10 Players who regularly play gaming machines quickly tire of particular games and therefore it is necessary for manufacturers of these machines to come up with innovative game features that add interest to the games provided on such machines in order to keep the players amused and therefore willing to continue playing the game.

Description of the Prior Art

15 Gaming or poker machines have been well known in the state of New South Wales for many years and have more recently gained considerable popularity throughout Australia, with quite substantial amounts of money wagered on these machines. There is a growing tendency for State governments to legalise the use of gaming machines by licensing operators, with resulting revenue gains through licence fees and taxation of monies invested. The licensed operation of gaming machines is the subject of State  
20 legislation and regulation. This regulation most always dictates a minimum percentage payout for a gaming machine. For example, a minimum of 85% of monies invested must be returned as winnings, and manufacturers of gaming machines therefore must design their machines around these regulatory controls.

25 With the growth that has occurred in the gaming machine market there is intense competition between manufacturers to supply the various existing and new venues. When selecting a supplier of gaming machines, the operator of a venue will often pay close attention to the popularity of various games with their patrons.

30 Therefore, gaming machine manufacturers are keen to devise games which are popular with players, as a mechanism for improving sales.

Many various strategies have been tried in the past to make games more enticing to players, and these strategies are often aimed at either increasing the maximum prize payable on a machine or creating at least the  
35 perception of more winning opportunities. The present invention falls into the latter category. For quite a few years, it has been possible to bet on more

than one pay line of a slot machine simultaneously. However this feature has been restricted to slot machines of the spinning reel type and video simulations of such machines. Machines of the type which deal a single hand of a card game such as poker (usually referred to as draw poker machines) have not previously provided multiple line games, for a variety of reasons, but primarily because of the difficulties associated with odds calculation when dealing multi hand games.

#### Summary of the Invention

According to a first aspect the present invention provides a slot machine including display means arranged to display a game being played on the machine, game initiating means to initiate a game on the machine and game control means responsive to the initiating means to control the playing of the game, the game played being a card game in which a single hand is randomly chosen from a deck of cards the chosen hand being displayed on the display means and compared with predetermined winning hands to determine if the game is a winning game, the machine being characterised in that the display means is arranged to simultaneously display a plurality of hands each randomly chosen from a deck of cards and each hand being compared with the predetermined winning hands to determine if a game is a winning game.

In one embodiment of the invention each hand is a player hand, however, in a second embodiment one hand is a house hand with which the remaining player hands are compared and a bonus prize awarded in the event that predetermined relationships exist between any player hand and the house hand. In one preferred embodiment the hands are poker hands and a bonus prize is awarded if the player hand beats the house hand. Preferably, also a bonus is awarded if the house hand is a predetermined combination.

Embodiments of the invention may either use a single deck of cards from which all hands are dealt or alternatively each hand may be dealt from its own separate deck. In the event that separate decks are used for each hand embodiments will often also include a draw feature in which the player may select the cards which he wishes to keep in each hand, discarding the rest, and the machine will deal new cards to replace the discards. The draw feature may also be incorporated in machines that deal each hand from a

single deck, however, it can be difficult to combine the draw feature with some of the other features which may be included in such games.

5 In embodiments which draw all hands from one deck, it is possible to set up more pay lines than there are hands. For example, if three hands are dealt, it is possible to have more than three pay lines, however, as some of the pay lines will use cards in common with others of the pay lines, the draw feature is inappropriate in such machines.

10 According to a second aspect the present invention provides a slot machine including display means arranged to display a game being played on the machine, game initiating means to initiate a game on the machine and game control means responsive to the initiating means to control the playing of the game, the game played being a card game in which a single hand is randomly chosen from a deck of cards the chosen hand being displayed on the display means and compared with predetermined winning hands to  
15 determine if the game is a winning game, the machine being characterised in that the display means is arranged to simultaneously display a plurality of hands, one hand being a house hand and the remaining hands being player hands, each player hand being compared with the house hand and a bonus prize awarded if a predetermined relationship exists between the house and  
20 player hands.

In a further embodiment of the invention, one or more cards from the house hand may be used in the player hands to produce a winning combination.

25 According to a third aspect the present invention provides a slot machine including display means arranged to display a game being played on the machine, game initiating means to initiate a game on the machine and game control means responsive to the initiating means to control the playing of the game, the game played being a card game in which a single hand is randomly chosen from a deck of cards the chosen hand being displayed on the display means and compared with predetermined winning hands to  
30 determine if the game is a winning game, the machine being characterised in that the display means is arranged to display one or more player hands and an additional card associated with each player hand, the additional card providing bonus options or additional winning options when compared with  
35 the respective player hand.

In one embodiment of the invention the additional card changes from game to game and indicates a particular card (eg. Ace of Hearts) or card value (eg. Ace of any suit) to be considered wild for that game.

5 In another embodiment the extra card may be used in place of any card in the associated player hand to enhance the hand.

In yet another embodiment the extra card may be used to indicate a suit for which a flush will pay a bonus prize over and above the prize normally paid for a flush.

10 In games employing the extra card the extra card may be drawn from the same deck as the player hand or from a separate deck depending on the function performed by the extra card.

Preferably, the machine provides a player operable selection means arranged to select the number of hands on which the player will bet.

15 Preferably, also prior to the selection of the hands, the player may make multiple bets on each hand being a winning hand.

In one embodiment of the invention the game played on the machine is draw poker.

20 In the preferred embodiment the game is played on a machine having a touch sensitive screen and the player controls the player operable selections by touching predetermined regions on the touch screen. The game initiator means also preferably includes a touch sensitive region of the screen the touching of which initiates a game.

In one embodiment of the machine a player may purchase an option to swap cards between hands to create a winning hand.

25 Brief Description of the Drawings

Embodiments of the present invention will now be described by way of example with reference to the accompanying drawings in which:

Figure 1 illustrates a touch screen slot machine incorporating the present invention;

30 Figures 2, 3, 6, 7 and 8 illustrate screen layouts for five embodiments of the invention;

Figure 4 is a flow chart showing operation of the game described with reference to Figures 2, 3 and 6; and

Figure 5 is a schematic diagram of a slot machine control circuit.

### Detailed Description of the Preferred Embodiments

In the following detailed description, the methodology of the embodiments will be described and it is to be understood that it is within the capabilities of the non-inventive worker in the art to introduce the methodology on any standard microprocessor based gaming machine by means of appropriate programming.

In slot machines of the spinning reel type, and video machines which simulate spinning reels, it is known to provide multi line displays with the possibility of players wagering on the outcome of one or more lines of the display. However, such arrangements have not previously been provided on draw poker machines which typically "deal" the player a single poker hand in each game.

Embodiments of the present invention provide novel arrangements for simultaneous wagering on several hands dealt in one game played on a gaming machine. This is achieved according to the present invention by dealing each of several hands in a single game from one or more full decks, such that each hand has identical outcome probabilities independently of each other hand.

Referring to Figure 1, the illustrated embodiment of the invention is housed in a conventional slot machine cabinet 10 including a prize display 12, a coin entry slot 13, a payout tray 14 and internally mounted game control processor circuits (refer to Figure 5).

Preferably, the game display means 11 comprises a video display screen 11 controlled to display images of the cards dealt in each hand. The video screen is preferably of the touch sensitive variety, having an array of touch sensitive areas located on its display surface. Player controls are implemented by displaying images corresponding to controls on the screen such that when the control images are touched, the associated function is caused to be performed.

One such player control is a gamble button 23, which when touched causes a game to be initiated.

Referring to Figure 2, a screen layout is illustrated for a first embodiment of the invention. In this embodiment, buttons 15, 16 and 17 allow selection by the player of corresponding hands upon which a wager is to be placed. Additionally, buttons 18, 19, 20, 21 and 22 enable bets of 1-5 credits to be placed on each hand. Once the player has selected his bet and

the number of hands to be played, he touches the gamble button 23 which causes the selected number of hands to be dealt.

5 In the illustrated embodiment up to three hands may be played simultaneously however, in other embodiments 5, 7 or 9 hands (or indeed any other number of hands) may be offered for simultaneous playing.

When the gamble button 23 is touched the dealt cards of each hand are displayed on the screen 11 in locations 24 a,b,c,d, and e, 25 a,b,c,d and e and 26 a,b,c,d, and e.

10 In one extended embodiment, cards may be held, at the player's discretion, during a second draw to improve the dealt hand. In this case, cards to be held are touched by the player to indicate to the controller the identity of the cards to be held.

15 Referring to Figure 3, in another extended embodiment, the player may purchase the right to swap cards between two hands by wagering additional credits prior to the hands being dealt. The screen layout for this further embodiment is illustrated in Figure 3. This embodiment is essentially identical to the first embodiment except that a draw button 28 is provided which enables the player to control the second draw.

20 Referring to Figure 4, a flow diagram is illustrated to show the logic of a control program which controls the operation of the game. From this diagram it will be noted that after starting the machine awaits selection of the number of hands to be played and the wager per hand. The control program then causes the selection of one or more hands from their respective decks, upon touching the gamble button 28 by the player.

25 After selecting each hand, it is displayed and a counter incremented and tested to determine if the required number of hands has been dealt. In the event that the count has not reached the required number, control returns to the point where a further hand is dealt from its respective deck. Once the required number of hands have been dealt the program compares the drawn hands with the predetermined prize winning hands and arranges payment of a prize.

30 While the flow chart of Figure 4 makes reference to 5 card hands, it will be recognised that this sequence is readily modified to draw 6 card hands or to draw a 5 card hands from one set of decks and an extra card for each hand from additional decks. Alternatively, it is a simple matter to draw all of the hands from a single deck.



The program to implement the sequence of figure 4 runs on a standard gaming machine control processor 31 as illustrated schematically in Figure 5. This processor forms part of a controller 30 which drives the display screen 11 and receives touch input signals from touch sensors 32 as well as receiving coin input pulses from a coin chute mechanism 33 and driving a coin payout mechanism 34.

Referring to figure 6, a game screen is illustrated for a further embodiment in which the first line of cards 40 a,b,c,d and e is dealt as a house hand and the second and third lines 24 a,b,c,d,e and 26 a,b,c,d, and e are dealt as player hands. Again, each hand is preferably dealt from a separate deck although it is also possible, particularly in the case where there is only one player hand, that the house and player hands are dealt from the same deck. In this game, bonus prizes are awarded if one of the player hands 24 or 26 beats the house hand 50 or in the event that the house is dealt a particular predetermined hand. In some embodiments it is also possible to substitute cards from the house hand for cards in one of the player hands to improve the respective player hand.

Turning now to figure 7, a screen for yet another embodiment is illustrated in which associated with each 5 card hand 24 a,b,c,d,e, 25 a,b,c,d,e and 26 a,b,c,d, and e is a sixth card, 24f, 25f and 26f respectively. For each hand 24, 25 and 26 the sixth card may provide one or more of the following functions:

- (i) defines a card to be treated as a wild card or joker for that hand;
- (ii) may be substituted for a card in the respective player hand to improve the hand; and
- (iii) may define a suit for which a flush in the respective hand will pay a bonus.

Referring to Figure 8, a screen layout is shown for yet another embodiment, in which each of the 5 card hands 24 a,b,c,d,e, 25 a,b,c,d,e and 26 a,b,c,d,e is dealt from a single deck and no hold or draw facility is provided.

In this embodiment the player may bet on any one or more of 9 pay lines 15, 16, 17, 50, 51, 52, 53, 54, 55 although it is also possible for embodiments to provide up to 243 pay lines (35) in which each pay line is provided by a different combination of 5 card positions in which 1 card position is selected from each column of the display.

In the illustrated embodiment the nine pay lines are defined by the following symbol positions.

line 1	24a	24b	24c	24d	24e
line 2	25a	25n	25c	25d	25e
line 3	26a	26b	26c	26d	26e
line 4	25a	24b	25c	24d	25e
line 5	24a	25b	24c	25d	24e
line 6	26a	24b	25c	24d	26e
line 7	25a	24b	26c	24d	25e
line 8	24a	26b	24c	26d	24e
line 9	26a	24b	26c	24d	26e

5           As with earlier embodiments the player selects lines by touching the appropriate line selection box on the left hand side of the screen and selects the bet per line by touching one of the five numbered boxes across the bottom of the screen before touching the gamble box to commence the dealing of the hands.

10           In each case of the games described with reference to figures 2, 3, 6, 7 and 8 the displays are illustrated as displaying three hands simultaneously. However, it will be recognised that the principles described are equally applicable to games displaying any number of hands that may be physically displayed on the screen 11.

15           It will be appreciated by persons skilled in the art that numerous variations and/or modifications may be made to the invention as shown in the specific embodiments without departing from the spirit or scope of the invention as broadly described. The present embodiments are, therefore, to be considered in all respects as illustrative and not restrictive.

## CLAIMS:

1. A slot machine including display means arranged to display a game being played on the machine, game initiating means to initiate a game on the machine and game control means responsive to the initiating means to  
5 control the playing of the game, the game played being a card game in which a hand is randomly chosen from a deck of cards the chosen hand being displayed on the display means and compared with predetermined winning hands to determine if the game is a winning game, the machine being characterised in that the display means is arranged to simultaneously display  
10 a plurality of hands each randomly chosen from a deck of cards at least one of the hands being a player hand and each player hand being compared with the predetermined winning hands to determine if a game is a winning game.
2. The slot machine of claim 1 wherein each hand is dealt to the player and each hand is compared with the predetermined winning hands to  
15 determine if the game is a winning game.
3. The slot machine of claim 1 wherein one hand is a house hand with which the remaining player hands are compared and a bonus prize awarded in the event that predetermined relationships exist between any player hand and the house hand.
- 20 4. The slot machine as claimed in claim 3 wherein a bonus prize is awarded if the player hand beats the house hand.
5. The slot machine as claimed in claim 3 wherein a bonus is awarded if the house hand is a predetermined combination.
6. The slot machine as claimed in any of the claims 1 to 5 wherein the  
25 hands are poker hands.
7. The slot machine as claimed in any one of the preceding claims wherein a single deck of cards is used from which all hands are dealt.
8. The slot machine of claim 7 in which the game is arranged to allow the player to optionally select more pay lines than there are hands.
- 30 9. The slot machine as claimed in any one of claims 1 to 6 wherein each hand is dealt from its own separate deck.
10. The slot machine as claimed in any one of the preceding claims in which a draw feature is provided such that the player may optionally select the cards which he wishes to keep in each hand, discarding the rest, and the  
35 machine will deal new cards to replace the discards.

11. The slot machine as claimed in claim 1 wherein the machine includes a touch sensitive screen and the player controls the player operable selections by touching predetermined regions on the touch screen.

12. The slot machine as claimed in claim 11 wherein the game initiator means also preferably includes a touch sensitive region of the screen the touching of which initiates a game.

13. A slot machine including display means arranged to display a game being played on the machine, game initiating means to initiate a game on the machine and game control means responsive to the initiating means to control the playing of the game, the game played being a card game in which a hand is randomly chosen from a deck of cards the chosen hand being displayed on the display means and compared with predetermined winning hands to determine if the game is a winning game, the machine being characterised in that the display means is arranged to simultaneously display a plurality of hands, one hand being a house hand and the remaining hands being player hands, each player hand being compared with the house hand and a bonus prize awarded if a predetermined relationship exists between the house and player hands.

14. The slot machine of claim 13 wherein each player hand is compared with predetermined winning hands to determine if the game is a winning game.

15. The slot machine of claims 13 or 14 wherein one or more cards from the house hand may be used in the player hands to produce a winning combination.

16. The slot machine as claimed in claim 13 wherein the machine includes a touch sensitive screen and the player controls the player operable selections by touching predetermined regions on the touch screen.

17. The slot machine as claimed in claim 16 wherein the game initiator means also preferably includes a touch sensitive region of the screen the touching of which initiates a game.

18. A slot machine including display means arranged to display a game being played on the machine, game initiating means to initiate a game on the machine and game control means responsive to the initiating means to control the playing of the game, the game played being a card game in which a hand is randomly chosen from a deck of cards the chosen hand being displayed on the display means and compared with predetermined winning

hands to determine if the game is a winning game, the machine being characterised in that the display means is arranged to display one or more player hands and an additional card associated with each player hand, the additional card providing bonus options or additional winning options when compared with the respective player hand.

- 5 19. The slot machine of claim 18 wherein the additional card changes from game to game and indicates a particular card or card value to be considered wild for that game.
- 10 20. The slot machine of any one of claims 18 to 19 wherein the additional card can be optionally used by the player in place of any card in the associated player hand to enhance the hand.
21. The slot machine as claimed in any one of claims 18 to 20 in which the extra card may optionally be used to indicate a suit for which a flush will pay a bonus prize over and above the prize normally paid for a flush.
- 15 22. The slot machine of any one of claims 18 to 21 in which the extra card may optionally be drawn from the same deck as the player hand.
23. The slot machine as claimed in any one of claims 18 to 20 in which the extra card may be optionally drawn from a separate deck to the deck from which the player hand is drawn.
- 20 24. The slot machine as claimed in any one of claims 18 to 23 wherein the machine provides a player operable selection means arranged to select the number of hands on which the player will bet.
25. The slot machine of claim 24 wherein the player may make multiple bets on each hand being a winning hand prior to the hands being drawn.
- 25 26. The slot machine as claimed in any one of claims 18 to 25 wherein the game played on the machine is draw poker.
27. The slot machine of any one of claims 18 to 26 wherein the machine includes a touch sensitive screen and the player controls the player operable selections by touching predetermined regions on the touch screen.
- 30 28. The slot machine as claimed in claim 27 wherein the game initiator means also preferably includes a touch sensitive region of the screen the touching of which initiates a game.
29. The slot machine as claimed in any one of claims 18 to 28 wherein a player may purchase an option to swap cards between hands to create a winning hand.
- 35

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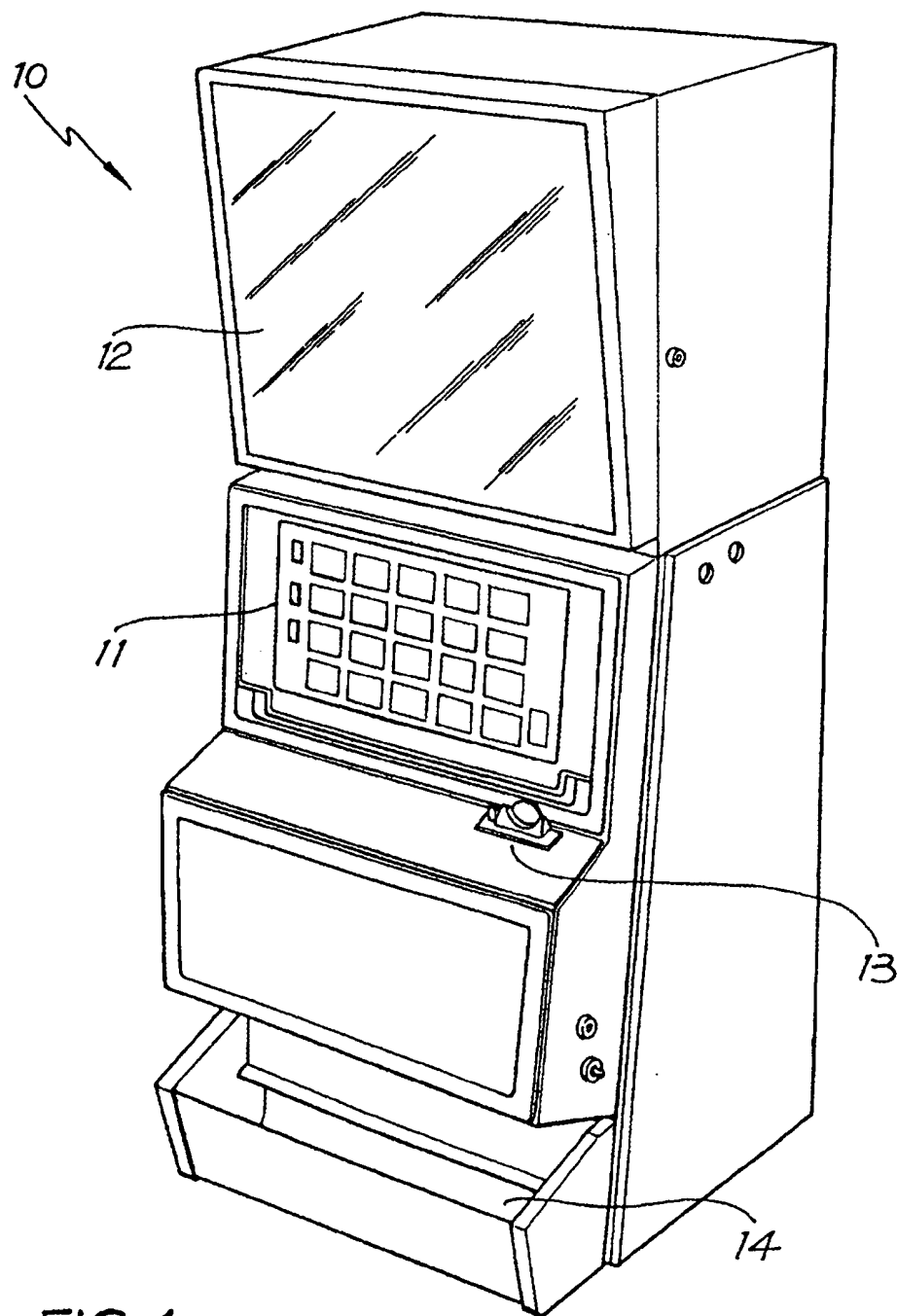


FIG. 1

2 / 8

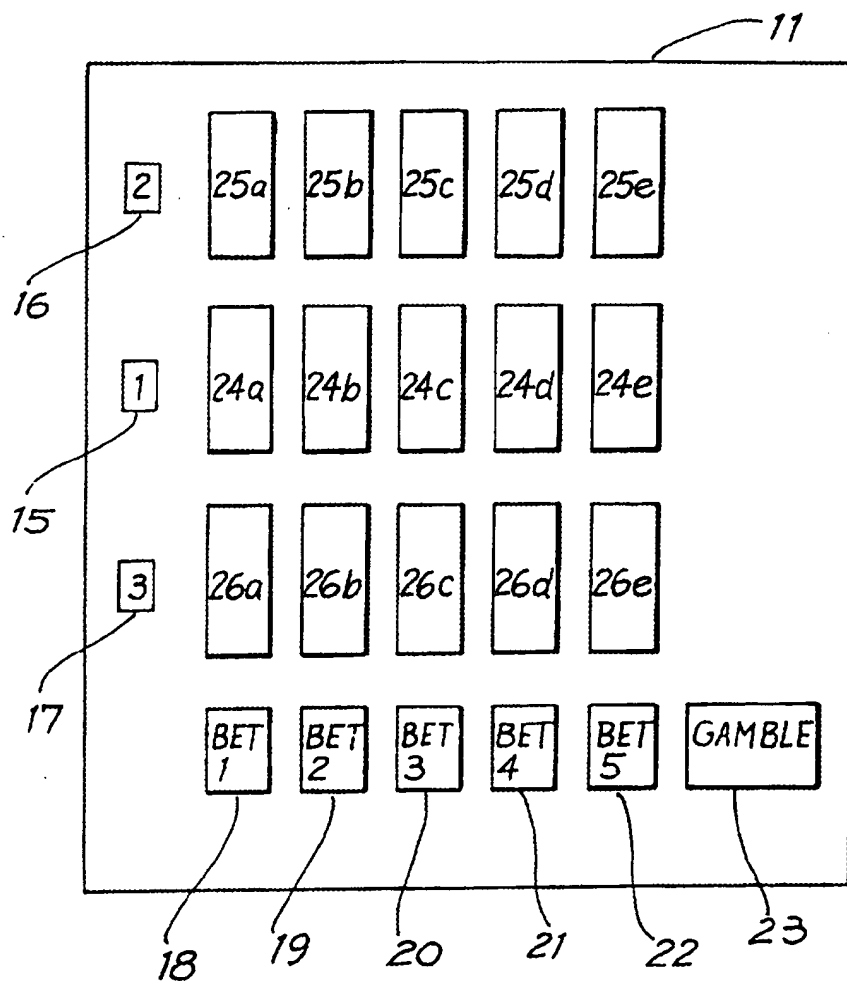


FIG. 2

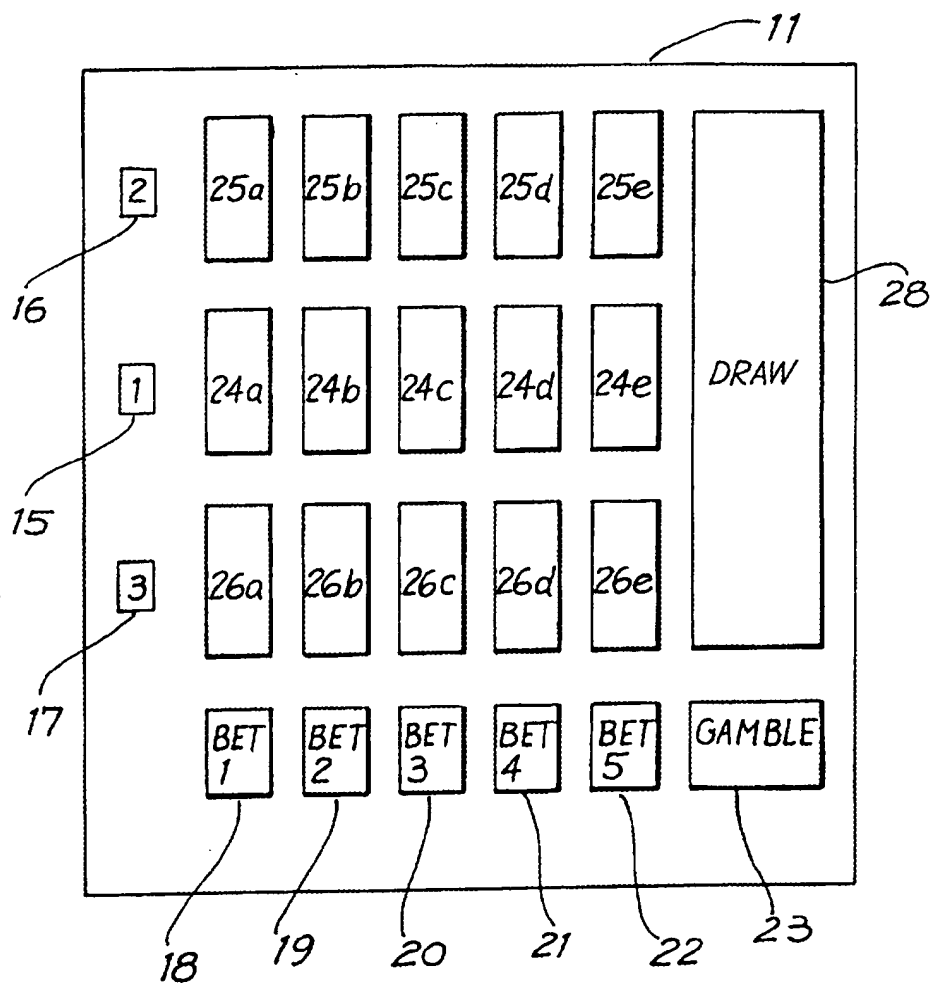


FIG. 3



4 / 8

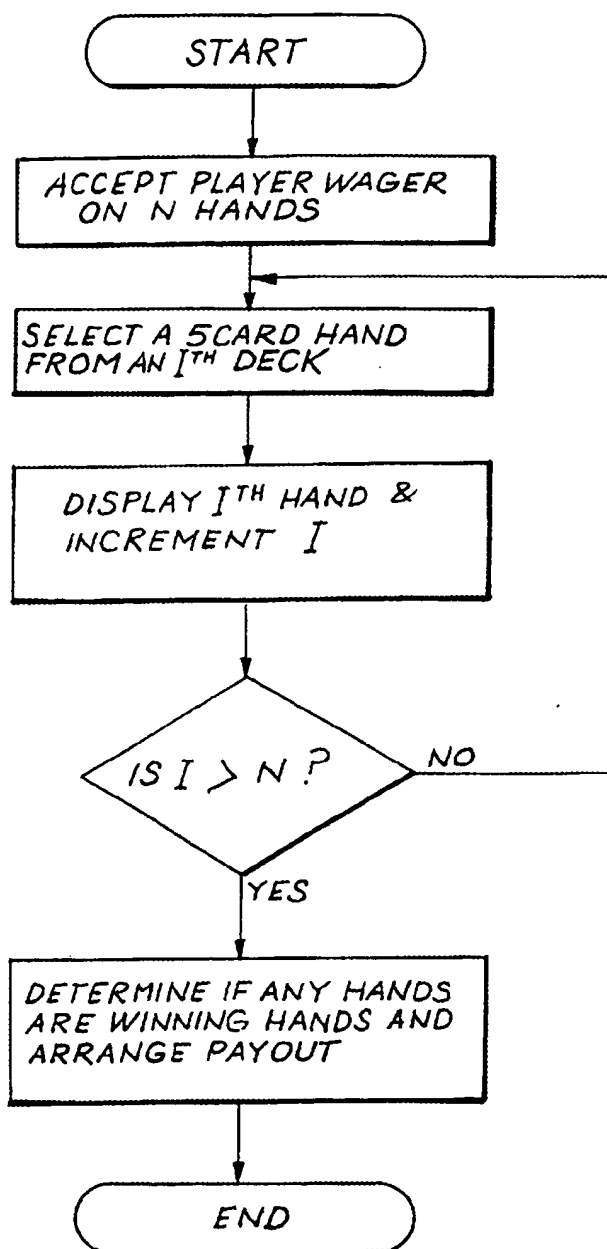
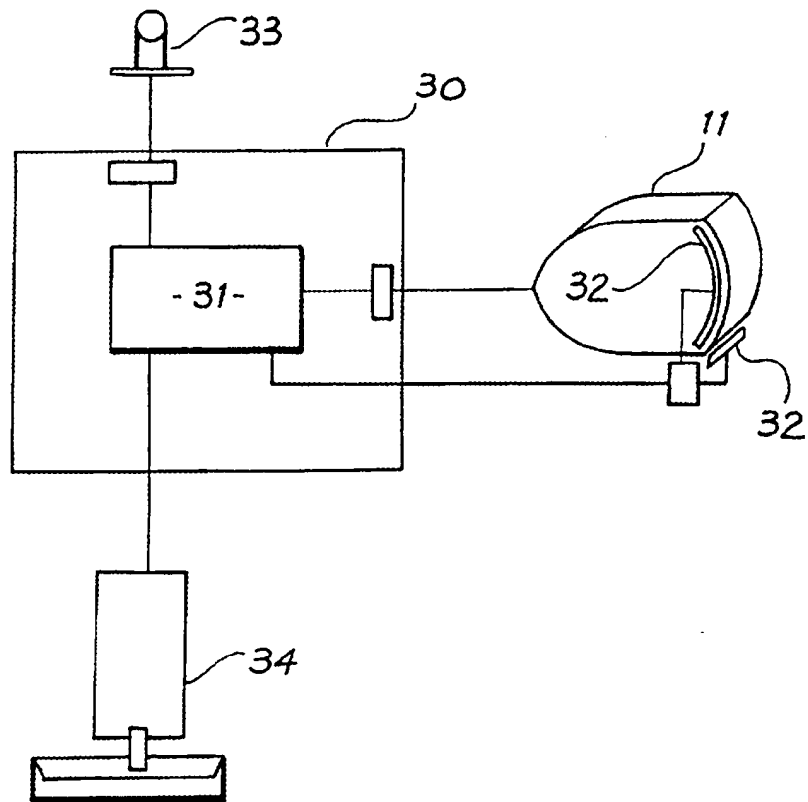


FIG. 4

5 / 8

**FIG. 5**

6 / 8

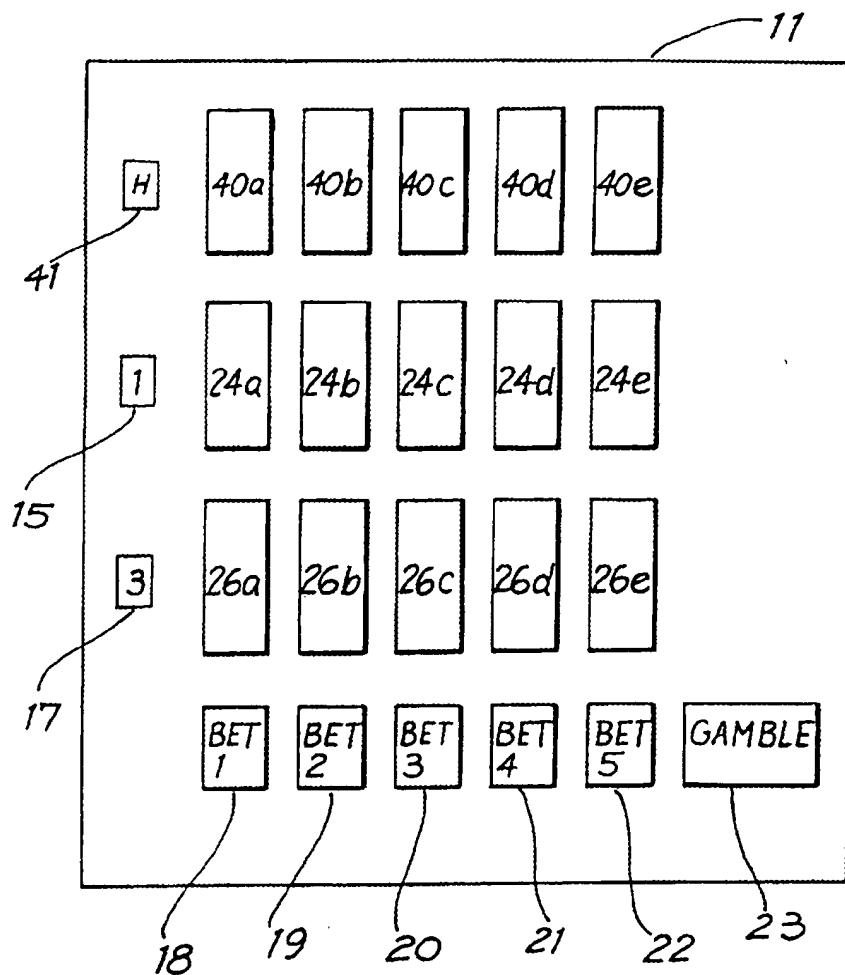


FIG. 6

7 / 8

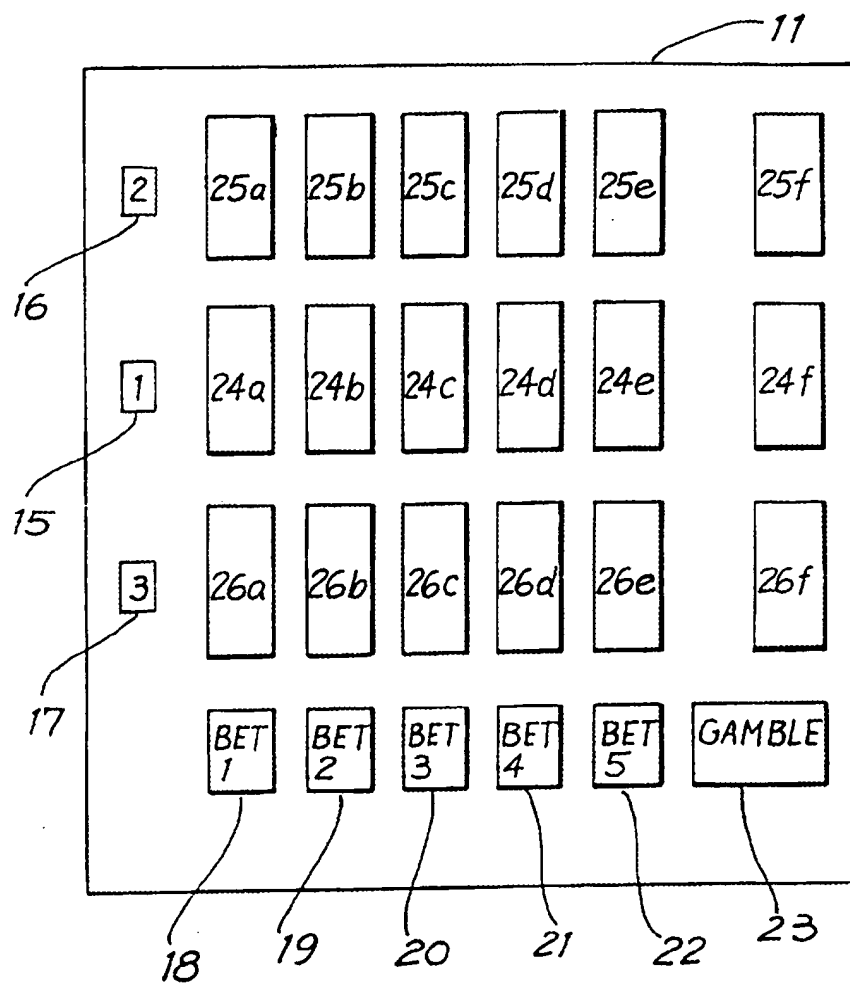


FIG. 7

8 / 8

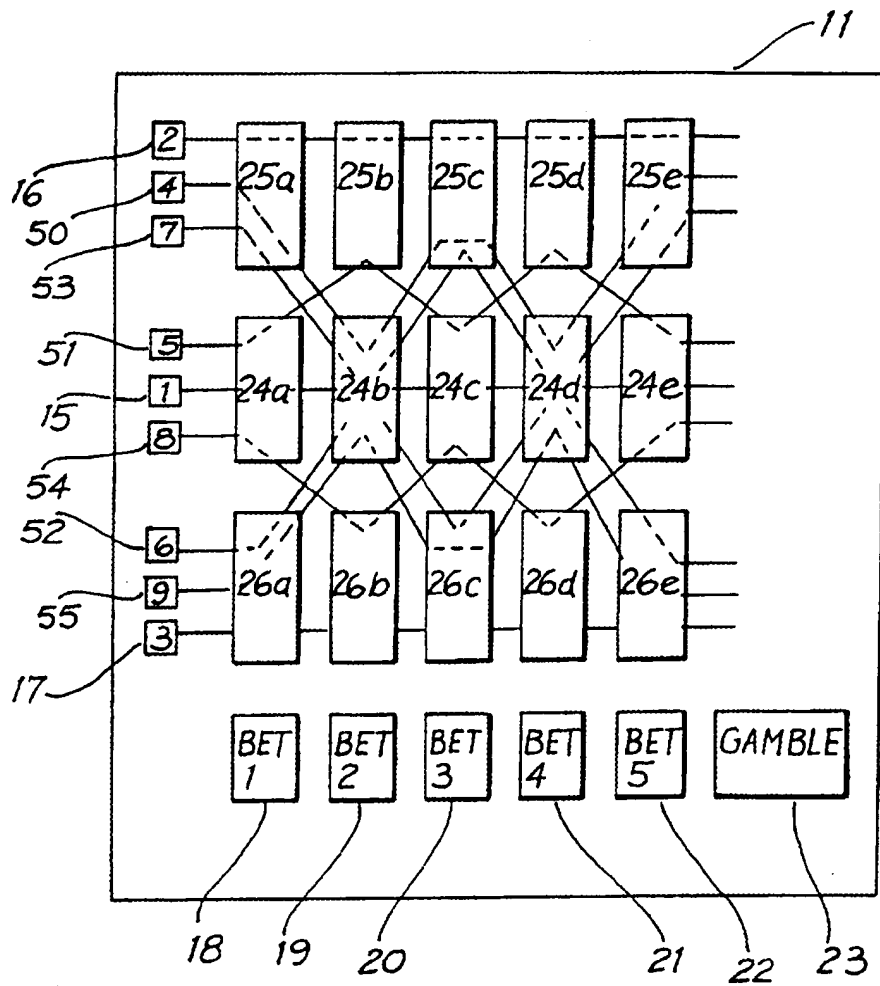
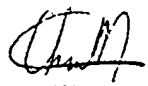


FIG. 8

# INTERNATIONAL SEARCH REPORT

International Application No.  
PCT/AU 97/00045

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>				
Int Cl <sup>6</sup> : G07F 17/34 17/32				
According to International Patent Classification (IPC) or to both national classification and IPC				
<b>B. FIELDS SEARCHED</b>				
Minimum documentation searched (classification system followed by classification symbols) IPC G07F 17/32 17/32				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched AU : IPC as above				
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) DERWENT AND JAPIO : [G07F 17/34 17/32 AND (CARD: OR POKER#)] OR (GAM: OR SLOT:) AND (CARD: OR POKER#) AND WIN: AND DISPLAY				
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>				
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
X, Y	AU 33126/89 A (CARIBBEAN STUD ENTERPRISES INC) 19 October 1989 See claims and figure 2	1-17, 18-29		
X, Y	US 5356140 A (DABROWSKI et al) 18 October 1994 See abstract and claims and figure 1	1-17, 18-29		
X, Y	EP 398767 A (KABUSHIKI KAISHA UNIVERSAL) 22 November 1990 Column 3 lines 1-22 and figure 1	1-17, 18-29		
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex				
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Date of the actual completion of the international search 1 April 1997		Date of mailing of the international search report <b>09.04.97</b>		
Name and mailing address of the ISA/AU AUSTRALIAN INDUSTRIAL PROPERTY ORGANISATION PO BOX 200 WODEN ACT 2606 AUSTRALIA Facsimile No.: (06) 285 3929		Authorized officer  <b>R. CHAO</b> Telephone No.: (06) 283 2191		

# INTERNATIONAL SEARCH REPORT

International Application No.  
PCT/AU 97/00045

C (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	GB 2191030 A (BELL-FRUIT Manufacturing Co. Ltd) 2 December 1987 See abstract and page 1 lines 102-109 and figure 1	18-29
Y	DE 3124751 A (GAUSELMANN P) 3 February 1983 See figure 1	18-29
Y	GB 2201821 A (NSM Apparatebau GmbH & Co. KG) 7 September 1988 See abstract and figure 1	18-29
Y	EP 60019 A (BARCREST Limited) 15 September 1982 See abstract and figures 2 and 3	18-29
A	AU 71515/94 (656302) B (ARISTOCRAF LEISURE INDUSTRIES PTY LTD) See claim 1 and figure 1	18-29
A	US 5332219 A (MARNELL, II et al) 26 July 1994 See abstract and figure 1	18-29

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International Application No.  
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This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report				Patent Family Member			
AU	33126/89	US	5022665	CA	1334983	US	4948134
		US	4861041	AT	96049	CA	1335381
		EP	338644	JP	2021883	NL	8900970
		US	5380012	US	5382025	US	5078405
		US	5288077	US	5364104	US	5364105
		US	5374067	US	5377973	US	5544893
		US	5584485	AU	30119/92	AU	21627/95
		AU	74220/96	US	4836553	AU	32220/93
		BR	9402366	BR	9402668	AU	18750/95
EP	398767	JP	61044047				
GB	2191030	NL	8701235				
GB	2201821	DE	3700861	NL	8702135		
EP	60019	EP	60018	GB	2092797	GB	2097160
		GB	2144568	GB	2092797		
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